

AMENDED CLAIMS

Received by the International Bureau on 08 December 2003 (08.12.03);
Claim 1 has been amended. Claims 2-20 are unchanged. New Claims 21-25 have been added.

WHAT IS CLAIMED IS:

1. In a wiper/tack cloth particularly for use in pre-wiping surfaces to remove lint and particulates in painting operations, the improvement comprising a substrate formed by a knitted continuous polyester filament, the substrate being treated with an anti-static agent, such that the wiper/tack cloth is anti-static and lint-free.

2. The improvement of claim 1, wherein the substrate is also treated with a dirt-encapsulating agent, such that the wiper/tack cloth captures and removes dirt and dust particulates.

3. The improvement of claim 1, wherein that the substrate has knitted edges to eliminate lint.

4. The improvement of claim 1, wherein the substrate has heated seal edges to eliminate lint.

5. The improvement of claim 1, wherein the anti-static agent comprises a quaternary ammonium salt.

6. The improvement of claim 5, wherein the anti-static agent comprises an alkyl quaternary ammonium salt.

7. The improvement of claim 1, wherein the salt is a chloride salt.

8. The method of making a lint-free anti-static wiper/tack cloth, comprising the steps of providing a substrate, passing the substrate through a bath containing chemical agents, squeezing the substrate to remove excess chemicals, passing the substrate through an oven for curing the wiper/tack cloth, and cutting the substrate into desired lengths such that the substrate becomes anti-static and additionally will capture dirt and dust particulates.

9. The method of claim 8, wherein the substrate comprises a roll of substrate which is unwound and passed through the bath.

10. The method of claim 9, wherein the substrate passes through the bath at approximately 40 feet per minute and at a temperature between approximately 280°F to 350°F.

11. The method of claim 8, wherein the substrate comprises a knitted continuous synthetic filament.

12. The method of claim 11, wherein the synthetic filament is a polyester filament.

13. The method of claim 8, wherein the wiper/tack cloth is cut by a heated tool which cuts and seals the wiper/tack cloth to eliminate loose fibers.

14. The method of claim 8, wherein the bath is provided with an anti-static chemical agent comprising a quaternary ammonium salt.

15. The method of claim 14, wherein the anti-static chemical agent is an alkyl quaternary ammonium salt.

16. An anti-static, dust particulate-capturing wiper/tack cloth made in accordance with the method of claim 14.

17. The dirt and dust particulate-capturing wiper/tack cloth of claim 16 which is intended, primarily, for use in painting operations.

18. The method of claim 8, wherein the substrate is squeezed between two rollers wherein approximately 2,500 pounds of total force is applied to the rollers.

19. The method of claim 8, wherein the substrate is formed from a woven material.

20. The method of claim 8, wherein the substrate is formed from a non-woven material.

21. In the method of wiping down vehicles in the painting department of an automotive manufacturing plant, wherein lint build-up on the vehicles during the wiping operation often requires re-wiping, re-painting or other re-working operations, thereby contributing to a substantial reduction in manufacturing efficiency, the improvement comprising the steps of providing tack cloths made from a woven synthetic filament and impregnated with a quaternary ammonium salt, and wiping down the finish of the vehicles with the tack cloths to preclude substantial lint build-up on the vehicles and the consequent expenses incurred in re-wiping, re-painting or other re-working operations, thereby substantially improving the manufacturing efficiency in the plant.

22. The method of claim 21, wherein the tack cloths are free of loose ends around the respective edges thereof.

23. The method of claim 22, wherein the tack cloths have heat sealed edges to eliminate lint.

24. The method of claim 22, wherein the tack cloths have knitted edges to eliminate lint.

25. The method of claim 21, wherein the tack cloths are formed from a polyester filament.

IN THE INTERNATIONAL BUREAU OF WIPO

In re International Application of:

ACE-TEX ENTERPRISES, INC.

Serial No. PCT/US03/18698

Filed: 12 June 2003

For: WIPER/TACK CLOTH WITH ANTI-STATIC PROPERTIES FOR PAINTING
OPERATION AND METHOD OF MANUFACTURE THEREOF

STATEMENT UNDER ARTICLE 19(1)

To the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20,
SWITZERLAND

Gentlemen:

In response to the International Search Report issued on 20 October 2003, please consider the following Statement Under Article 19(1) in conjunction with the amended and new claims.

The present invention arose through a need in the auto paint industry. An improved paint was developed but the paint was very sensitive to lint and particulate matter on the surface to be painted. Attempts were made to modify the paint formulation which were unsuccessful. Despite the expertise and accumulated knowledge of experts in both the paint and automotive fields, a solution was not available until the applicants provided the material which is the subject of the present application.

One feature of the application is the substrate which must be free of lint. A synthetic ~~material is used~~ and the edges of the substrate have no loose ends. This is accomplished by heat sealing the edges or by knitting the edges. The substrate is a wiper/tack cloth which essentially is a layer of fabric which may be square, rectangular, circular or oval and is held flat on the

surface by a person or by a machine. Another feature of the application is that the wiper/tack cloth is impregnated with an anti-static material. As disclosed, a successful anti-static material has been a quaternary ammonium compound.

The cited reference U.S. Patent No. 5,869,410, *Smith et al* is a system for softening or treatment of fabric articles. The reference is for moistened fabric articles and is a bag which comprises pores, holes, slits to allow the escape of moisture (column 7, lines 27-36). Flexible sheets are added to the bag along with moistened clothing or other fabric articles to be treated (column 2, lines 37-49).

"It is preferred that the fabric-treatment formulation of the present invention is a gelled or thickened liquid comprising (a) an effective amount of a dispersing agent; (b) a liquid vehicle selected from the group consisting of water, a water-miscible organic solvent and mixtures thereof; (c) at least one fabric treatment agent; and (d) a surfactant. The fabric-treatment formulation of the present invention is released from the sheet upon physical contact with the fabric articles, e.g., as when the fabric articles and the sheet are tumbled together in the bag."

(column 2, lines 50-59)

It is submitted that the cited reference is unrelated to the present application. The fabric softener of the reference is not used in the paint or automotive industry. The formulation of the fabric softener contains components which are not in the present application and the impregnant of the present application has components which are not present in the formulation of the '410 reference. The present application is directed to lint-free fabric and steps are taken to assure that no lint is produced on the edges of the fabric from which the wiper/tack cloth is made. The cited reference is not concerned with lint but requires a bag which allows the escape of moisture. There is no motivation for a person skilled in the art of wiper/tack cloths to consider the cited reference. Even if considered, the fabric and the impregnating formulation would be different from those of the application.

Claim 1 has been amended herein to emphasize the wiper/tack cloth use in preparing surfaces to remove lint and particles and to further distance claim 1 from the cited reference.

Claims 21-25 have been added which are directed to the use of the wiper/tack cloth in wiping down the surfaces before painting. These claims emphasize the absence of lint in the fabric.

Respectfully submitted

4 Dec 2003
Date

Robert M. Gamson
Robert M. Gamson
Attorney for Applicant

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18698

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B 32 B 27/04.
US CL : 442/97,101,110-116.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 442/97,101,110-116.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
PALM

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y -- A	US 5,869,410 (SMITH et al.) 09 February 1999 see entire document.	1-7 8-20

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

- " " document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

29 September 2003 (29.09.2003)

Date of mailing of the international search report

20 OCT 2003

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
Box 450
Alexandria, Virginia 22313-1450
Facsimile (703)305-3230

Authorized officer

Tetzel Morris

Telephone No. 703-308-0661